

REMARKS

Entry of the foregoing, reexamination and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow are respectfully requested.

At the outset, Applicants note with appreciation the indication that claims 1 and 7-15 stand allowed in view of the Decision on Appeal issued by the Board of Patent Appeals and Interferences on February 28, 2002 (Official Action at pages 2 and 3).

By the above amendments, claims 2 and 17 have been amended for clarification purposes to recite "processing an aluminum alloy containing Mg at a high temperature of 200°C or above to form the alloy into a processed article having a final shape." Support for these amendments can be found in the instant specification at least at page 1, lines 9-13; page 6, lines 13-15; taken in connection with page 15, lines 17-20.

Claims 2 and 17 have also been amended for readability purposes by replacing the term "the surface" with "the surface of the processed article." Claim 17 has been amended for clarification by replacing the term "high-pressure" with "high-temperature," and by replacing the term "200°" with "200°C".

New claims 29 and 30 depend from claims 2 and 17, respectively, and are directed to methods wherein an oxide layer is formed on the surface of the article during the step of processing the aluminum alloy containing Mg, and wherein the oxide layer is decreased or removed by the step of etching the surface of the processed article. Support for new claims 29 and 30 can be found in the specification at least at page 5, lines 5-11, taken in connection with page 7, lines 3 and 4.

In the Official Action, claim 17 stands rejected under 35 U.S.C. §112, second paragraph, for reciting the term "200°" without indicating the temperature scale to which it pertains. It is noted that claim 17 as originally presented in the Amendment and Election of Species filed on August 12, 1994, recited the term "200°C." Accordingly, claim 17 has been amended to conform same with the originally presented claim 17. As such, withdrawal of this rejection is respectfully requested.

Claims 2, 5 and 17 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 3,655,467 (*Sopp Jr*) combined with U.S. Patent No. 5,104,465 (*McAuliffe et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

According to one aspect of the present invention as defined by claim 2, a method for treating the surface of an aluminum alloy high-temperature processed article is provided. The method comprises processing an aluminum alloy containing Mg at a high temperature of 200°C or above to form the alloy into a processed article having a final shape, etching the surface of the processed article with an aqueous solution containing a chelating agent, and then carrying out coating type chromating.

Claim 17 is also directed to a method for treating the surface of an aluminum alloy high-temperature processed article.

Sopp Jr relates to the use of a cleaning-etching solution on aluminum base alloys (col. 1, lines 5 and 6). *Sopp Jr* discloses treating aluminum base alloys, especially aluminum base alloys with a content of magnesium, with a caustic solution which contains a soluble pyro- or polyphosphate (col. 1, lines 45-48).

Sopp Jr does not disclose or suggest each feature of aspects of the present invention as defined by claims 2 and 17. For example, the Patent Office has correctly acknowledged that *Sopp Jr* does not disclose or suggest "heating the aluminum-magnesium alloy at a temperature of 200° or above" (Official Action at page 4). Moreover, it is submitted that *Sopp Jr* does not disclose or suggest processing an aluminum alloy containing Mg at a high temperature of 200°C or above to form the alloy into a processed article having a final shape, as recited in claims 2 and 17.

McAuliffe et al relates to the production of aluminum sheet stock having reduced earing and improved strength which is suitable for conversion into useful products, such as container ends and container bodies (col. 1, lines 12-15).

Like *Sopp Jr*, *McAuliffe et al* fails to disclose or suggest processing an aluminum alloy containing Mg at a high temperature of 200°C or above to form the alloy into a processed article having a final shape, as recited in claims 2 and 17. In this regard, the Patent Office has acknowledged that "[t]he McAuliffe et al patent is directed to aluminum alloy sheet stock which can be used for making cans" (Official Action at page 5). As well, *McAuliffe et al* discloses that the aluminum alloy sheet stock "is suitable for conversion into useful products" (col. 1, lines 14 and 15). Clearly, such aluminum alloy sheet stock cannot properly be considered the same as or suggestive of the claimed processed article having a final shape in light of the fact that *McAuliffe et al* discloses that the aluminum alloy sheet stock is subsequently shaped into a different, "useful" product.

Moreover, one of ordinary skill in the art would not have been motivated to utilize the *Sopp Jr* etching process to treat the aluminum alloy sheet stock of *McAuliffe et al* in the manner

suggested by the Patent Office. In this regard, the Patent Office has taken the following position at page 5 of the Official Action:

It would have been obvious at the time the invention was made to have utilized the etching and coating method of Sopp, Jr. to have processed the heat treated aluminum-magnesium alloy of McAuliffe et al because improved adhesion of a chromate coating and paint would have been achieved as taught by Sopp, Jr.

Applicants respectfully but strenuously disagree with the Patent Office's assertion. As discussed above, the aluminum alloy sheet stock formed from the process of *McAuliffe et al* is further processed into a "useful" product. That is, *McAuliffe et al* has no recognition or suggestion that the aluminum alloy sheet stock *per se* is useful as an end product. Accordingly, one of ordinary skill in the art would not have been motivated to chromate coat or paint the aluminum alloy sheet stock *per se*, let alone utilize the *Sopp Jr* process to treat the aluminum alloy sheet stock prior to chromate coating or painting.

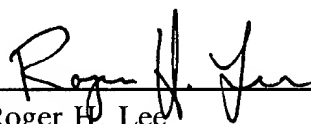
For at least the above reasons, it is apparent that no *prima facie* case of obviousness exists. Accordingly, withdrawal of the §103(a) rejection over *Sopp Jr* and *McAuliffe et al* is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 
Roger H. Lee
Registration No. 46,317

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: March 17, 2003

Attachment to AMENDMENT dated March 17, 2003

Marked-up claims 2 and 17

2. (Amended) A method for treating the surface of an aluminum alloy high-temperature processed article, comprising [heating] ~~processing~~ an aluminum alloy containing Mg at a high temperature of 200°C or above to form the alloy into a processed article having a final shape, etching the surface of the processed article with an aqueous solution containing a chelating agent, and then carrying out coating type chromating.

17. (Three Times Amended) A method for treating the surface of an aluminum alloy [high-pressure] ~~high-temperature~~ processed article, comprising [heating] ~~processing~~ an aluminum alloy containing Mg at a high temperature of 200°C or above to form the alloy into a processed article having a final shape, etching the surface of the processed article by a single step process of exposing the surface to an aqueous solution containing a chelating agent wherein the aqueous solution consists of a solution having a pH of 7 or higher, and then carrying out at least one surface treatment selected from the group consisting of hydration oxidation treatment, coating type chromating, anodizing, alternating current electrolysis in an aqueous alkali solution, and coating.